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(21)Application number: **10134350**(22)Date of filing: **28.04.98**(30)Priority: **31.03.98 US 98 52365**(71)Applicant: **AVENTIS RES & TECHNOL GMBH & CO KG**(72)Inventor: **OGURA SHIZUO**
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DAVIES BARRIE LINTON**(54)LITHIUM BATTERY AND ELECTRODE****(57)Abstract:**

PROBLEM TO BE SOLVED: To provide excellent conductivity and mechanical strength by dispersing a plurality of carbon nano-tubes in a conductive matrix containing a disulfide group whose S-S bond is cleaved by electrochemical reduction and regenerated by electrochemical oxidation.

SOLUTION: Loosened carbon nano-tubes can be provided by a process including the step of adding a plurality of carbon nano-tube aggregates to a liquid and

adding a shearing force to the liquid in order to loosen the aggregates. As the method, for example, the shearing force can be added by use of a homogenizer. Preferably, a compound containing the loosened carbon nano-tubes and a liquid medium is mixed with an organic compound containing a disulfide group and a conductive polymer. Otherwise, the mixture containing the loosened carbon nano-tubes and the liquid medium may be mixed with a conductive polymer containing a mercapto group.

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